Headquarters U.S. Air Force

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9982 – Including ESOH Requirements in JCIDS Documents

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Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

- **Current Initiatives Target the Entire Life Cycle Framework**
  - **ESOH in Joint Capabilities Integration & Development System (JCIDS)**
  - **Environmental Sustainability Criteria used for decision making**
  - **Expanded use of DFAR Clauses**
  - **Expanded review of documentation**
  - **Participation in Program Support Reviews**

Agenda

- **Background**

- **Task Process**

- **AT&L Policy Memo**

- **Training Development**

- **Way Ahead**

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- **Memo Title: "Reducing Preventable Accidents"**

  - **"Accountability is essential to effective leadership"**

  - **"If we need to change our training, improve our materiel acquisition, or alter our business practices to save the precious lives of our men and women, we will do it."**

  - **"We will fund as a first priority those technologies and devices that will save lives and equipment."**

  - **"We will retrofit existing systems"**

USD (AT&L) Memo – 21 Nov 06

- **ATP TF prepared AT&L memo to "influence the entire life cycle of systems" and effectively integrate ESOH considerations**

  - **Joint Capabilities Integration and Development System (JCIDS) – define system required capabilities**

  - **System development process – to meet JCIDS requirements**

    - **Must address each High and Serious ESOH risk and applicable safety technology requirements in program reviews**

  - **Fielded systems – where ESOH problems manifested; where "pain" is felt (by the operator)**

    - **Class A & B mishap reports must include System Program Office hazard analysis and materiel mitigation measure recommendations to eliminate or reduce risk of reoccurrence**

"ESOH in JCIDS" Objective

- **To be able to successfully influence system design development from ESOH perspective, have to first influence the JCIDS document development process**

- **Need to have key ESOH requirements captured in the JCIDS documents in terms of "capability statements"**

  - **Enhance program office ESOH staff ability to successfully advocate for ESOH considerations in design trade off decisions**

  - **Link the ESOH compliance and risk reduction to system cost, schedule, and performance requirements**

  - **Enable program office ESOH staff to trace ESOH technical requirements to the JCIDS requirements**

"The Acquisition & Technology Programs Task Force will develop a process to provide the DoD Joint Capabilities Integration and Development System with recommendations that have the potential to cost effectively prevent accidents. These inputs should include all aspects of the MIL-STD-882D System Safety Process."

USD (AT&L) Memo – 21 Nov 06

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- "**accident**" as used by SECDEF = <u>mishap</u>

- "**all aspects of the MIL-STD-882D System Safety Process**" = MIL-STD-882D definition of <u>**mishap**</u>

> **"An unplanned event or series of events resulting in death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment"**

> **System Safety Focus: Preserving combat capability by reducing the risk of mishaps**
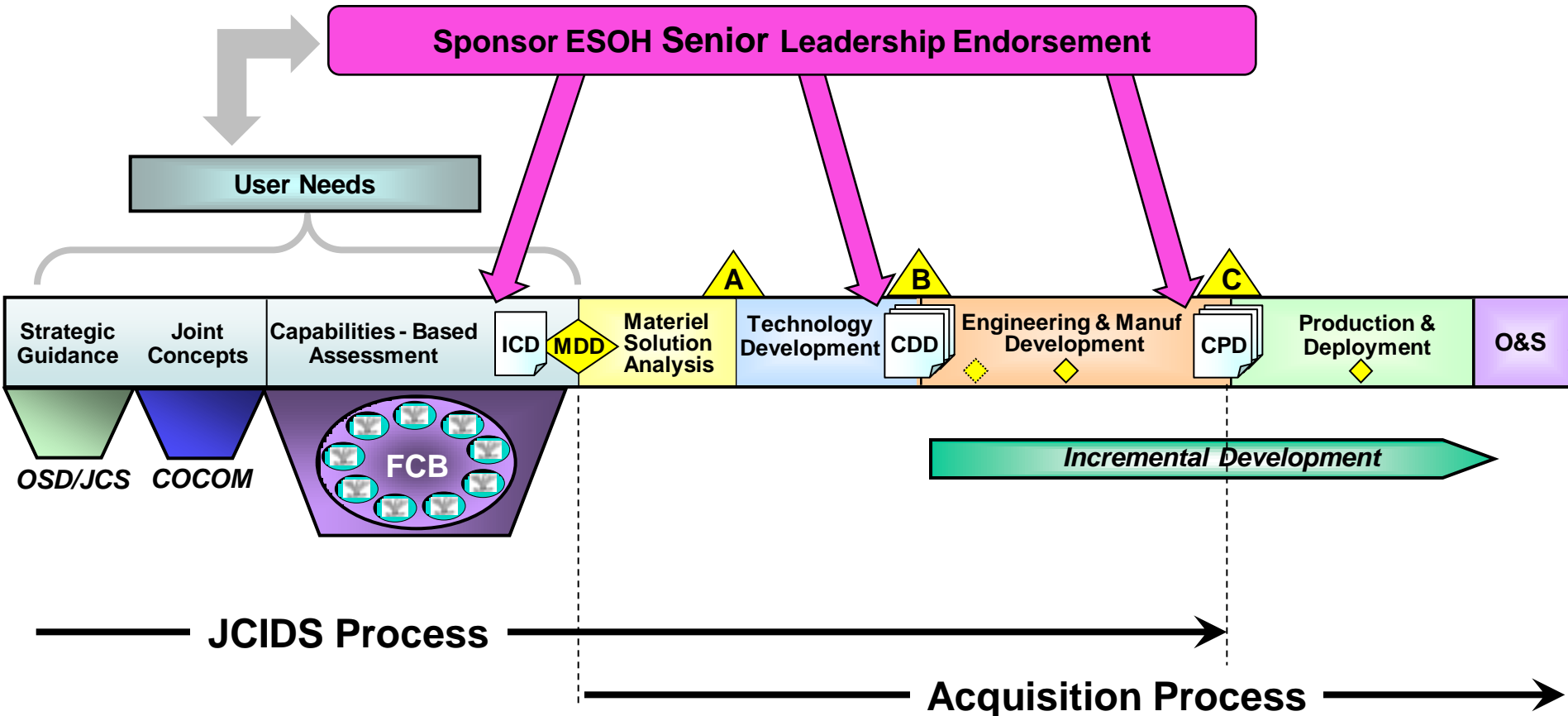
ESOH in JCIDS Process

- **Applies to all JCIDS documents**

- **Requires ESOH senior leadership endorsement of JCIDS documents**

  - **Acknowledges that ESOH communities had opportunity to provide inputs (no guarantees)**

  - **Ensures ESOH leadership aware of future systems or system modifications for support planning purposes**

  - **Each DoD Component to designate ESOH senior leaders responsible for endorsing JCIDS documents**

  - **Each DoD Component to set up its own internal ESOH review process to support endorsements**

- **ATP TF developing training to support ESOH SME participation in JCIDS document development**

The Defense JCIDS and Acquisition Management Systems

Draft AT&L Policy Memo

- **Draft ready to enter formal staffing**

- **Linked to development of training materials**

- **Addressed to Components and Joint Staff**

- **Directs each Component to designate to AT&L the office(s) that must provide ESOH endorsements**

- **Requests Joint Staff incorporate process into CJCSI 3170 Manual**

- **Directs the DoD Components to brief AT&L (or designee) annually on implementation status**

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- **Effort funded by DSOC through the ATP TF**
- **Purpose: to prepare ESOH practitioners to be effective participants in the JCIDS document development process – pre-gatekeeper**
- **Goal: Have training in place to support policy release**
- **End State: a Defense Acquisition University (DAU) Continuous Learning Module (CLM), similar to CLE009 "System Safety in Systems Engineering"**
  - **Generic DoD training, not Service-specific**
  - **Potential for follow-on Service-specific training development**
- **NDIA Systems Engineering Division System Safety Committee sponsoring workshops to develop training materials content**
  - **First workshop held 16-17 Sep 09 in St. Louis, MO**
  - **Second workshop held 18-19 Nov 09 in Arlington, VA**
  - **Third workshop held 17 – 19 Feb 10 in Arlington, VA**

- **Training material topics**

- **Overview of the Capability-Based Planning process**

    - **CJCS 3170.01 Manual**

    - **Terminology**

    - **Top-level process description**

    - **Sequence and appropriate content of documents: Initial Capabilities Document (ICD), Capability Development Document (CDD), Capability Production Document (CPD)**

- **How to develop applicable and appropriate ESOH capability statements; and**

- **How to be an effective participant in the JCIDS document development process**

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- Developing appropriate ESOH capability statements

  - Identifying potential ESOH issues/concerns for a given solution/system

    - Lessons learned from similar systems' mishap data, Notices of Violation, NEPA documents, ESOH hazard logs, etc.

    - ESOH engineering evaluation of proposed system concept or design (extent of evaluations depend on maturity of system)

    - Results from testing activities

      - Tailored for the given JCIDS document (ICD vs. CDD vs. CPD)

  - Degree of specificity

  - Thresholds and Objectives (except for Other System Attributes)

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- **Participating in JCIDS document development**
  - **Goal: effective advocacy for inclusion of ESOH capability statements**
    - **Describe contribution to preserving mission capability**
    - **Demonstrate potential program and ESOH risk reduction**
    - **Address any potential lifecycle cost savings**
  - **Understanding the appropriate use of parameters and attributes**
    - **Key Performance Parameters (KPPs): essential and critical to program success; typically not appropriate for ESOH**
    - **Key System Attributes (KSAs): crucial to program success; appropriate for the most significant ESOH issues**
    - **System Attributes: support KPPs and KSAs; appropriate for ESOH issues**
    - **Other System Attributes: appropriate for detailed ESOH inputs**

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- **Finalize training development**

  - **Compile and refine training materials (PowerPoint, which will serve as basis for Storyboards)**

  - **Initiate Phase II – production of a online course**

    - **Structure formal training with instructional designers**

    - **Verify/Validate – Beta testing**

    - **Launch on DAU Learning Management System**

- **Formal staffing of policy memo through OSD and Components**

  - **Expected to begin July 2010**

  - **ECD Nov 2010**

Way Ahead – Training ECDs

- **May 2010 – Complete course materials**

- **Jun 2010 – Verify and validate course materials**

- **Jul 2010 – Initiate DAU course development**

- **Mar 2011 – DAU course Beta testing**

- **Jun 2011 – DAU course available**

> ### *Best estimate: DAU "ESOH in JCIDS" training course available Jun 2011*

Proposed approach designed to contribute to preservation of combat capability by reducing preventable losses without encumbering the JCIDS process

Questions?

Integrity - Service - Excellence

ATP TF Response to AT&L JCIDS Task

- **ATP TF stood up Preventable Accident Reduction Working Group (PARWG)**
  - **Purpose: Develop response to 21 Nov 06 USD (AT&L) memo assigning ATP TF JCIDS task**
  - **Focus: Process to provide opportunity for including ESOH recommendations into the Sponsor JCIDS document development process**
  - **Development: Vetted process details with J-8 and DoD Secretariat Systems Engineering and ESOH principals**
  - **Implementation: Parallel development of policy and supporting training**

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- **Key Outcomes from Workshop 3**

  - **Using the "Mobile Gun System" as a recurring example throughout training to demonstrate appropriate capability statements – same example system currently threaded through DAU course CLE009, System Safety in Systems Engineering**

  - **Using JCIDS swim lane from the wall chart as backbone for overview of JCIDS process**

  - **Inclusion of prioritized ESOH requirements document list in ICD Appendix B, References**

  - **Identification of "special cases" for ESOH capability statements in ICDs. Examples to include:**

    - **C5 meeting ICAO standard so can use commercial airports**

    - **Identifying presence of marine endangered species prior to use of high power sonar**

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- **Key Outcomes from Workshop 3**

  - **Tools for assessing ESOH capability needs**

    - **ESOH Considerations and Exacerbating Conditions – multi-step tool to identify and prioritize (red/yellow/green) capability needs for a given system. May also serve as library for example text .**

    - **Progressive Resource Applicability Guide – Identifies sources where ESOH capability needs may be identified and indicates their applicability to the main JCIDS documents (ICD, CDD, CPD). Table builds as each document covered in training**

  - **Graphic to depict level of effort, generic capability content, and specific capability content associated with each JCID document as a aid to scoping the ESOH effort**

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